STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF
STATE PLANNING COORDINATION

May 24, 2005

Mr. Ronald H. Sutton
McCrone, Inc.
111 South West Street, Ste. 6
Dover, De 19904

RE: PLUS review – PLUS 2005-04-16; Baywood Town Center

Dear Mr. Sutton:

Thank you for meeting with State agency planners on May 4, 2005 to discuss the proposed plans for the Baywood Town Center project to be located on the Northeast side of State Route 5, a short distance Southeast of State Route 24.

According to the information received, you are seeking rezoning of 38 acres from AR-1 and C-1 to C-1 for 388 residential units and 32,000 square feet of commercial space.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

- The project is proposed for an Investment Level 1 and 2 areas, within the Environmentally Sensitive Developing Area according to Sussex County's comprehensive plan. State policies generally support development activities within Investment Levels 1 and 2.

- Because the proposed use on the rear of the parcel (currently zoned AR-1) is residential and not commercial, the applicant should consider applying for HR rather than the C-1 zoning indicated on the PLUS application.

- The applicant use some of the ideas discussed in the *Better Models for Development in Delaware* book that was shared at the PLUS meeting to redesign the proposal. Specifically, a more walkable design and more open space incorporated into the proposal would be desirable.

Street Design and Transportation

- A traffic impact study was completed for this project in November 2002 and DelDOT commented to Sussex County on it in January 2003. You should be prepared to address the recommendations set forth DelDOT regarding this study.

- One of their findings when they reviewed the TIS in January 2003, was that with the improvements contemplated the intersection of Delaware Routes 23 and 24 would operate at level of service (LOS) D there on summer Saturdays through 2010. Subsequent TIS for other developments in the area have indicated that the LOS there would decline to E or F during those conditions. The improvements that DelDOT made to this intersection in 2003 were the product of both engineering studies and a public involvement process that the County was aware of. With public support they could have built larger improvements, but built what was generally acceptable. Consequently, they are unwilling to revisit the subject of intersection improvements there in the near future. In considering the subject rezoning, the County needs to understand that DelDOT's 2003 improvements to this intersection added a small amount of capacity this intersection, that the improvements will have to last for a significant period of time, and that a decision to allow more intense development on Long Neck is a decision to use up their capacity faster. **The proposed development is comparable to what was addressed in the TIS, but the proposed acreage of C-1 would allow commercial development that would generate considerably more traffic than the TIS addressed. HR zoning would not raise this concern.**

- At the end of the street where the angled parking is proposed, there is a pond proposed. Regarding the street that would arc around that proposed pond, DelDOT recommends that it be eliminated in favor of more of a grid pattern, which would provide for better traffic flow within the site.

- There are two ponds proposed to run along Long Neck Road. DelDOT will require a 20-foot minimum buffer between the ultimate right-of-way and the top of slopes of the ponds. It is recommended that they be located further from the road.

Natural and Cultural Resources

- The Department also encourages the applicant reduce the amount and size of pond(s) on this parcel unless they are specifically designed for stormwater management.

- The site plan should allow for preservation of as much of the forest as possible.

- According to the site plan, 1024 spaces are proposed, but only 728 parking spaces are required. Reducing the number of spaces would not only preserve trees, but would reduce the high percentage of impervious surface (55%).

- In addition, trees are to be cleared for stormwater management ponds. It does not make sense to clear trees for a stormwater management pond, considering the benefit of trees in flood protection.

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: Ann Marie Townshend 739-3090

The project is proposed for an Investment Level 1 and 2 areas, within the Environmentally Sensitive Developing Area according to Sussex County's comprehensive plan. State policies generally support development activities within Investment Levels 1 and 2.

The PLUS application indicates that the applicant is seeking a rezoning of land currently zoned AR-1 to C-1, with a portion of the site already zoned C-1. We note that the site plan shows the proposed commercial uses in the area of the site already zoned C-1, and we recommend that if the intent is to develop the site residentially, the developer seek a residential zoning district that would accommodate the proposed use.

Regarding the proposal's design, we recommend that the applicant use some of the ideas discussed in our *Better Models for Development in Delaware* book that was shared at the PLUS meeting to redesign the proposal. Specifically, we recommend a more walkable design and more usable open space incorporated into the proposal.

State Historic Preservation Office (SHPO) – Contact: Alice Guerrant 739-5685

Nothing is known in this parcel. There are a few historic properties noted on our maps nearby, but none within sight of this development. There is only a low potential for archaeological sites of any period here. This project will not affect any historic properties.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

1) DelDOT supports the recommendations from Sussex County and the Office of State Planning Coordination that the applicant should seek HR zoning, rather than C-1 zoning for their proposed condominium development. C-1 zoning permits a wide range of commercial uses, many of which generate more traffic per square foot than the residential uses permitted in C-1 districts. As discussed in Comment 5 below, traffic congestion is a concern at this location.

2) Long Neck Road is classified as a collector road. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. Collector roads generally have somewhat wider rights-of-way. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 40 feet from the centerline on collector roads. Therefore we will require right-of-way dedication along the frontage to provide any additional width needed from this project. A 5-foot wide dedication is shown on the concept plan, but that may not be sufficient.

3) DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site. An easement for that purpose is shown on the concept plan and it may be acceptable.

4) A traffic impact study was completed for this project in November 2002 and DelDOT commented to Sussex County on it in January 2003. At that time, the development was proposed as a 40,000 square foot sports club with a 400-person banquet facility, 300 townhouses or condominiums, and 58,000 square feet of retail space. Their recommendations based on that study were as follows:

    a) A note on the plan should limit the development of Baywood Town Center (BTC) as follows. No more than 200 dwelling units in the combined Baywood Greens and BTC developments may be sold, and no retail development on the BTC project may be built, until Tunnell Companies, L.P. has improved the intersection of Long Neck Road, School Lane, and Banks Road. The intersection improvements should be done in a manner acceptable to DelDOT, and at a minimum should provide a separate lane for each movement.

b) The plan should include sidewalks on both sides of internal access roadways linking the residential and commercial areas of the Baywood Town Center development. Sidewalks should also be provided to link to Long Neck Road and other residential and commercial areas along the site frontage.

c) The plan should include a bus pad near the site entrance located and designed in a manner acceptable to DART First State.

d) The plan should provide for the shoulder of Long Neck Road along the property frontage to be improved as necessary to carry bicycle traffic.

e) A note on the plan should require Tunnell Companies, L.P. to enter an agreement with DelDOT, whereby the Tunnell Companies would fund half of the costs of a traffic signal at the intersection of Long Neck Road and Bayshore Entrance/Baywood Town Center Entrance. The costs shall include pedestrian signals and crosswalks, at DelDOT's discretion, and all costs associated with coordinating this signal with other existing signals along Long Neck Road.

Since DelDOT sent those recommendations, two things have changed. First, regarding the intersection of Long Neck Road, School Lane and Banks Road, they have a project, directed primarily toward improving Banks Road, that they could expand to include these improvements. Discussions are underway with the developer regarding an arrangement where by the developer would contribute to that project rather than making the intersection improvements independently. Mr. George Spadafino, the manager of our Banks Road project, may be contacted for more information. Mr. Spadafino may be reached at (302) 760-2356.

Second, having considered the matter further, it is recommended that sidewalks be provided on both sides of <u>all</u> internal roadways in the development to encourage walking and to provide a safe environment in which to do that.

5) While DelDOT did not mention it at the PLUS meeting, one of their findings when they reviewed the TIS in January 2003, was that with the improvements contemplated the intersection of Delaware Routes 23 and 24 would operate at level of service (LOS) D there on summer Saturdays through 2010. Subsequent TIS for other developments in the area have indicated that the LOS there would decline to E or F during those conditions. The improvements that DelDOT made to this intersection in 2003 were the product of both engineering studies and a public involvement process that the County was aware of. With public support they could have built larger improvements, but built what was generally acceptable. Consequently, they are unwilling to revisit the subject of intersection improvements there in the near future. In considering the subject rezoning, the County needs to understand that DelDOTs 2003 improvements to this intersection

added a small amount of capacity this intersection, that the improvements will have to last for a significant period of time, and that a decision to allow more intense development on Long Neck is a decision to use up their capacity faster.

The proposed development is comparable to what was addressed in the TIS, but the proposed acreage of C-1 would allow commercial development that would generate considerably more traffic than the TIS addressed. HR zoning would not raise this concern.

6) The plan accompanying the PLUS form shows head-in angled parking along the street leading into the site. DelDOT understands from the Fire Marshal's Office that none of that parking will be permitted. For the first block, between Long Neck Road and the first internal intersection, DelDOT agrees: there should be no parking. For the second block, they are not opposed to the parking being eliminated. If it were to remain, they would recommend back-in angled parking for two reasons. First, it eliminates the need for drivers to back into moving traffic. Second, when a child exits a vehicle in a row of parked cars, the door forms a barrier. With back-in parking, they are on the sidewalk side of that barrier rather than the street side.

7) At the end of the street where the angled parking is proposed, there is a pond proposed. Regarding the street that would arc around that proposed pond, DelDOT recommends that it be eliminated in favor of more of a grid pattern, which would provide for better traffic flow within the site.

8) There are two ponds proposed to run along Long Neck Road. DelDOT will require a 20-foot minimum buffer between the ultimate right-of-way and the top of slopes of the ponds. It is recommended that they be located further from the road. The runoff from the site must be managed and if the developers' engineer submits calculations, demonstrating to their satisfaction that the rate and volume of the post-development runoff would not exceed the rate and volume of the pre-development runoff, then discharge to the roadside ditch will be permitted.

9) The Delaware Transit Corporation (DTC) operates DART Bus Route 207, which provides seasonal service from the Rehoboth Beach Park and Ride Lot to Massey's Landing by way Delaware Route 1, Delaware Route 24 and Long Neck Road (Delaware Route 22). This service runs nine round trips per day June through August, with less frequent service in May and September and could be useful to both residents and employees at the proposed development.

DTC recommends that sidewalk be required along the property frontage and that an 8-foot by 8-foot concrete pad be located near the main entrance to provide a waiting area for riders. While the matter will need to be discussed, we do not view the sidewalk as being in addition to the multi-modal path mentioned in Comment 3 above. As noted in Comment 4c above, the concrete pad was first

recommended in our January 2003 comments on the TIS. We recommend that the developer's engineer contact Mr. Wayne Henderson, a DTC service development planner, and Mr. John Fiori, our Subdivision Manager for Sussex County, to discuss the specific locations of the pad and the path or sidewalk. Mr. Henderson may be reached at (302) 577-3278 ext. 3553. Mr. Fiori may be reached at (302) 760-2260.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-3091

Soils

According to the soil survey update Fort Mott-Henlopen complex, Downer and Hurlock were mapped in the immediate vicinity of the proposed project. Fort-Mott Henlopen complex and Downer are well well-drained upland soils that, generally, have few limitations for development. Hurlock is a poorly-drained wetland associated (**hydric**) soil that has severe limitations for development.

Wetlands

According to the Statewide Wetland Mapping Project (SWMP) mapping, no wetlands were mapped on subject parcel. However, potential farmed wetlands may exist on this parcel. Therefore, the applicant is strongly recommended to contact the Farm Service Agency (FSA) of the USDA to assess whether any potential farmed wetlands on subject parcel meet the recognized criteria for classification as "prior converted wetlands." Prior converted wetlands are farmed wetlands that have drained or altered before December 23, 1985, and no longer meet the wetland criteria established under the 404 program. Such wetlands are considered exempt from regulatory protection provided that there is no proof of a continuous "fallow period" of five years or greater in that parcel's cropping history. Parcels converted after said date regardless of cropping history are considered jurisdictional by the Army Corps of Engineers (ACOE). The contact person for assessing a parcel's cropping history is Sally Griffin at the USDA – she can be reached at 678-4182.

It is also recommended that the developer maintain a minimum 100-foot buffer width from landward edge of all wetlands. In cases where natural buffer vegetation has been removed or reduced by past development or farming activities, the developer is encouraged to restore/establish to said buffer width or greater with native herbaceous and/or woody vegetation.

The Department also encourages the applicant reduce the amount and size of pond(s) on this parcel unless they are specifically designed for stormwater management. Further it is also strongly recommended that Stormwater management pond(s) be at least 100 feet away from all wetlands and/or streams.

Impervious Cover

Given the environmentally sensitive nature of this watershed, the Department believes that the applicant should devote more effort to the implementation of innovative efforts or BMPs to reduce impervious cover. Using pervious materials in lieu of impervious paving surfaces (asphalt or concrete), can significantly reduce the amount of pollutant-laden surface runoff into wetlands and streams.

ERES Waters

This project is located adjacent to receiving waters of Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 11.5 of Delaware's "Surface Water Quality Standards" (as amended August 11, 1999), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of nutrient runoff through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 11.5(e) of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree practicable, or where attainable, a standard requiring no discharge of pollutants.

TMDLs

With the adoption of Total Maximum Daily Loads (TMDLs) as a "nutrient-runoff-mitigation strategy" for reducing nutrients in the Inland Bays Watershed, reduction of nitrogen and phosphorus loading will be mandatory. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are authorized under federal code, states are charged with developing and implementing standards to support those desired use goals. The Jurisdictional authority for attaining these use goals will fall under the auspices of Section 11.5 of the State of Delaware's Surface Water Quality Standards (as amended August 11, 1999), and will be achieved via nutrient reductions referred to as "pollution control strategies."

Nutrient reductions prescribed under TMDLs are assigned on basis of water quality concerns – that is, the those regions deemed to be of greatest environmental concern will require correspondingly higher levels of nutrient reduction than those regions deemed less environmentally sensitive. In this watershed, these regions are demarcated as high and low reduction zones. The high reduction zone corresponds to the western portion of the watershed, and requires a reduction of nitrogen and phosphorus by 85 and 65 percent, respectively. The low reduction zone corresponds to the eastern portion of the watershed, and requires a reduction of nitrogen and phosphorus by 40 percent.

In order for the applicant to verify compliance with the TMDL mandate, a full nutrient accounting process known as nutrient budget should be prepared. The developer/consultant should contact Lyle Jones in the Department's Watershed Assessment Section for further information regarding the acceptable protocol for calculating a nutrient budget. He can be reached as 739-4590.

The applicant should keep in mind that the Department considers the inclusion of stormwater management and/or wastewater treatment areas as an inappropriate/inaccurate metric for open space calculations. Using the open space as the applicant currently proposes will underestimate the calculated TMDL nutrient loading rates.

Water Supply

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-3665.

Water Resource Protection Areas

A portion of the site falls within a wellhead protection area (see attached map). Wellhead protection areas are surface and subsurface areas surrounding a public water supply well where the quantity and quality of groundwater moving toward such wells may be adversely affected by land use activities.

According to the State law that created the Source Water Protection Program, county and municipal governments will be required to enact ordinances to protect Water Resource Protection Areas. The following language has been excerpted from the Source Water Protection Guidance Manual for Local Governments, Supplement 1 - Ground-Water Recharge Design Methodology. While the local ordinances are not yet in place, the developer may find the language useful in modifying the site plan to protect the wellhead protection area.

Water Resource Protection Areas (WRPAs) are defined as (1) surface water areas such as floodplains, limestone aquifers, and reservoir watersheds, (2) wellhead areas, or (3)

excellent recharge areas. The purpose of an impervious cover threshold is to minimize loss of recharge and protect the quality and quantity of ground and surface water supplies in WRPAs.

New development in WRPAs may exceed the 20 % impervious cover threshold, but be no more than 50 % impervious, provided the applicant submits an environmental assessment report recommending a climatic water budget and facilities to augment recharge. The environmental assessment must document that post-development recharge will be no less than predevelopment recharge when computed on an annual basis.

Commonly, the applicant offsets the loss of recharge due to impervious cover by constructing recharge basins that convey relatively pure rooftop runoff for infiltration to ground water.

The Department recommends the following (ranked in order of preference):

1) Preserve WRPAs as open space and parks by acquisition or conservation easement.
2) Limit impervious cover of new development to 20 % by right within WRPAs.
3) Allow impervious cover of new development to exceed 20% within WRPAs (but no more than 50% impervious) provided the applicant develops recharge facilities that directly infiltrate rooftop runoff.
4) Allow impervious cover of new development to exceed 20% within WRPAs (but no more than 50% impervious) provided the applicant develops recharge facilities that infiltrate stormwater runoff from forested and/or grassed surfaces with pretreatment.

For more information, refer to:

Source Water Protection Guidance Manual for the Local Governments of Delaware at http://www.wr.udel.edu/swaphome/phase2/Manual/SwappManual.pdf

and

Ground-Water Recharge Design Methodology at http://www.wr.udel.edu/swaphome/phase2/Manual/SwappManual_supplement_1.pdf .

Sediment and Erosion Control/Stormwater Management

1. Please submit a sediment control and stormwater management plan to the Sussex Conservation District for review. No construction (i.e. clearing, filling, grading, etc.) shall take place on-site
2. until a sediment control and stormwater management plan has been approved by the Conservation District.

3. Please indicate on the sediment and stormwater management plan who shall be responsible for maintenance of the stormwater management facilities both during construction and after.

4. During the design of the sediment control and stormwater management plan, considerations should be made for maintenance (i.e. access, easements, etc.) of any structures or facilities.

5. During the design of the stormwater management facility please note that both stormwater quantity and quality must be addressed.

6. If a stormwater management pond is going to be utilized as a sediment trap/basin during construction it must be designed to accommodate 3600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete.

7. Specify First Floor elevations for all lots.

8. All ponds are required to be constructed per pond code 378.

9. Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval.

10. Please demonstrate to the Conservation District that you have an adequate outfall for the proposed stormwater facilities.

11. A CCR is required for this development since the gross acreage for the project exceeds 50 acres.

12. Under the DNREC Health and Safety Memo of 2000, all wet ponds are required to have an open water depth of 3+ feet that comprises 50-75% of the pond area. Please address.

13. Due to the proximity to sensitive areas, the Conservation District will require reinforced and super silt fence to adequately protect wetland areas during the construction of the site.

14. Please contact the Conservation District when design of stormwater management facility is initiated, as they would like to work closely with you in its design.

Nuisance Waterfowl

Stormwater management ponds may attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting

season. Short manicured grass around ponds provide an attractive habitat for these species. Methods of goose control used on the adjacent golf course may not be appropriate for a residential area. We recommend native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. In addition, considering the large percentage of impervious surface, a buffer is needed around the ponds to maintain water quality. Without an adequate buffer, algal blooms could result which are not aesthetically pleasing and quite odoriferous. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, property managers or owners will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Forests

This project is within the Environmentally Sensitive Developing Area and this should be reflected in the site plan. The site plan should be changed to allow for preservation of as much of the forest as possible, considering that more than 5,000 acres of forest have been lost in Delaware since 1990 and this loss has led to a corresponding loss of forest-dependent species. From the appearance of the site plan the number of acres to be cleared is probably higher than what was noted in the application (2.95 acres to be removed). In reality, once this site is built out, most of the forested area will have been cleared. Cumulative impacts are a concern here, considering that another proposed development adjacent to this one will also remove a large percentage of existing forest. One way to preserve more forest would be to reduce the number of parking spaces. According to the site plan, 1024 spaces are proposed, but only 728 parking spaces are required. Reducing the number of spaces would not only preserve trees, but would reduce the high percentage of impervious surface (55%). In addition, trees are to be cleared for stormwater management ponds. It does not make sense to clear trees for a stormwater management pond, considering the benefit of trees in flood protection. It is doubtful that the number and size of ponds in the site plan are necessary for stormwater management. Some of these ponds are for aesthetics only, and trees should not be cleared for that purpose. A reduction in the number and size of the ponds would create more space in the cleared areas to move structures and parking.

Underground Storage Tanks

There are two inactive and one active LUST site(s) located near the proposed project:

Pepup #8, Facility # 5-000160, Project # S9207201
Shorts Marina, Facility # 5-000495, Project # S8908252
Uncle Willies # 8, Facility # 5-000493, Project # S0311068

No environmental impact is expected from the above inactive/active LUST site(s). However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would be need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel in the contaminated areas.

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to estimate the amount of solid waste that will be generated as a result of construction and occupancy.

Air Quality

Air pollution threatens the health of human beings and other living things on our planet. While often invisible, pollutants in the air create smog and acid rain, cause cancer or other serious health effects, diminish the protective ozone layer in the upper atmosphere, and contribute to the potential for world climate change. Breathing polluted air can have numerous effects on human health, including respiratory problems, hospitalization for heart or lung disease, and even premature death. Some can also have effects on aquatic life, vegetation, and animals.

The Department of Natural Resources and Environmental Control is asking that local jurisdictions consider mitigation to help resolve this issue. Mitigation might involve limiting large new developments to growth zones, focusing development to urban areas capable of providing mass transit services, requiring more energy efficient homes which would lessen air quality impacts, and promoting walkability and bikability within and between developments and town centers.

Once complete, vehicle emissions associated with this project are estimated to be 29.8 tons (59,553.9 pounds) per year of VOC (volatile organic compounds), 24.7 tons (49,306.6 pounds) per year of NOx (nitrogen oxides), 18.2 tons (36,379.3 pounds) per year of SO2 (sulfur dioxide), 1.6 ton (3,238.4 pounds) per year of fine particulates and 2,490.8 tons (4,981,612.1 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 12.0 tons (24,020.8 pounds) per year of VOC (volatile organic compounds), 1.3 ton (2,643.0 pounds) per year of NOx (nitrogen oxides), 1.1 ton (2,193.3 pounds) per year of SO2 (sulfur dioxide), 1.4 ton (2,830.4 pounds) per year of fine particulates and 48.7 tons (97,375.0 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 4.8 tons (9,520.1 pounds) per year of NOx (nitrogen oxides), 16.6 tons (33,113.5 pounds) per year of SO2 (sulfur dioxide) and 2,442.1 tons (4,884,237.1 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO_2	$PM_{2.5}$	CO_2
Mobile	29.8	24.7	18.2	1.6	2490.8
Residential	12.0	1.3	1.1	1.4	48.7
Electrical Power		4.8	16.6		2442.1
TOTAL	41.8	30.8	35.9	3.0	4981.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 4.8 tons of nitrogen oxides per year and 16.6 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage http://www.energystar.gov/:

"ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,
high performance windows,
controlled air infiltration,
upgraded heating and air conditioning systems,
tight duct systems and
upgraded water-heating equipment."

The Energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

State Fire Marshal's Office – Contact: Duane Fox 856-5298

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal,

the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements**:
   - Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Mercantile)
   - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Apartment)
   - Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
   - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
   - Buildings greater than 10,000 sq.ft., 3-stories of more or over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.
   - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
   - Show Fire Lanes and Sign Detail as shown in DSFPR

c. **Accessibility**
   - All premises which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Long Neck Road must be constructed so fire department apparatus may negotiate it.
   - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
   - Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
   - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.

- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**
   - Provide type of fuel proposed, and show locations of bulk containers on plan.

e. **Required Notes**:
   - Provide a note on the final plans submitted for review to read " All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
   - Proposed Use
   - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
   - Square footage of each structure (Total of all Floors)
   - National Fire Protection Association (NFPA) Construction Type
   - Maximum Height of Buildings (including number of stories)
   - Note indicating if building is to be sprinklered
   - Name of Water Provider
   - Letter from Water Provider approving the system layout
   - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
   - Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Mark Davis 739-4811

The Delaware Department of Agriculture has no objections to this site at this time; however, they encourage the developer to contact them if they have any questions concerning tree preservation and tree planting opportunities within the site (302) 698-4500.

Public Service Commission - Contact: Andrea Maucher 739-4247

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

Inland Bays Preservation Company was awarded a CPCN to provide wastewater services to this area. Inland Bays should coordinate with Sussex County regarding wastewater services to this project.

Delaware Emergency Management Agency – Contact: Don Knox 659-3362

Due to the large number of residential units and commercial development being proposed, a significant impact to public safety is foreseen by implementation of this project. The developer should notify the police, fire service, and emergency medical response organization serving this portion of Sussex County, to keep them apprised of all development activities. Routes 5, 24, and 113 are coastal storm evacuation routes and this development will be affected by traffic volume on these routes during a coastal storm event.

Department of Education – Contact: Nick Vatican 739-4658

388 dwelling units could generate an estimated 194 additional students for the Indian River School District. Sussex County does not have school concurrence legislation at this time. It is recommended that the developer submit a package to the school district for informational purposes.

If the development is approved and built, please use the following information for school transportation planning. If there are homes more than 1/2 mile from the nearest public road (outside the development), developers should plan wide enough streets so that large school buses can access and turn around (without backing) from the furthest areas within the development while picking up and dropping off students. Should there not be any sites more than 1/2 mile from the nearest public road, provisions for appropriate pick-up and drop-off at the development entrance should be included. The developer should work closely with the school district transportation supervisor.

Sussex County – Contact: Richard Kautz 855-7878

The proposed development application also requires a conditional use approval for the residential use in the B-1 district which fronts along Long Neck Road on the east side of the property. If only residential uses are proposed in the area to be rezoned the applicant should consider the HR district in lieu of the C-1 district.

The developer should avoid impacting adjacent residential uses by providing a visual and sound buffer between the parking areas and the adjacent residential uses.

This project is situated in an Environmentally Sensitive Development Area. The required report should include how the PLUS comments have been addressed and how the plan has been revised accordingly.

The Sussex County Engineer Comments:

Approximately 31 acres of the proposed project is located within the boundary of the Long Neck Sanitary Sewer District. Sewer service has not been provided to the parcel. The existing Long Neck Sanitary Sewer District does not have capacity to provide

service to the parcel. A letter on file with the Sussex County Engineering Department dated January 7, 2002 indicated the developer would process wastewater from the parcel through the developer's Baywood facility. Baywood is adjacent to the Longneck Sanitary Sewer District and a privately operated system serves the development. Parcel 270 must be de-annexed from the Long Neck Sanitary Sewer District before the project could connect to the Baywood System. Please note the PLUS application indicates sewer service will be provided by Sussex County.

A de-annexation process is similar to the procedure for being brought into a sewer district. It requires advertising and posting Public Notices, then conducting a public hearing followed by a majority vote of the Sussex County Council approving the de-annexation. There will be a fee of $1500.00 to cover the cost of advertising and administrative procedures. Prior to beginning the process to de-annex, the Sussex County Engineering Department must be provided with a design report from a qualified engineer that shows the whole system serving Baywood has capacity for the addition of the proposed project.

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

Constance C. Holland, AICP
Director

CC: Sussex County